

# Tufts

## VETERINARY MEDICINE



# Take Me Home

Shelter veterinarians work to make animals adoptable

PLUS: NEW CAMPUS CENTER • INCUBATING THE LIFE SCIENCES • BIG HEADS

It's smooth sailing—  
or kayaking—again  
for Becki Smith and  
her Jack Russell,  
Anna Marie.

## Bouncing Back

The Jack Russell terrier Anna Marie wasn't acting like herself that Friday afternoon in July.

"I came home from work, and she didn't start her usual trampoline-like jumps," recalls Becki Smith of Belchertown, Mass. "She was just looking up at me as if to say, 'I know something's wrong.'"

Smith noticed that her 11-pound dog's throat was swollen, so she called her vet. "They said she'd probably swallowed something, and to wait until the morning—but we had a bad night of it."

Overnight, Anna's throat continued to swell, and she was having trouble breathing. So early Saturday morning, Smith drove her little dog to an emergency hospital about 45 minutes north of home.

Advised to seek treatment at the Foster Hospital for Small Animals at the Cummings School of Veterinary Medicine—an hour and a half away—Smith climbed back in the car with her suffering five-year-old dog and headed for North Grafton.

"When we got there, the triage nurse took her right in," Smith says.

The Tufts team took a quick look at Anna's throat using ultrasound, and found that it contained small pockets of fluid. A needle aspiration confirmed the fluid was bloody. Further examination determined that blood had pooled under Anna's tongue and back into her throat, causing the swelling.

Anna's heart stopped while she was being examined. Thankfully, CPR brought the terrier's pulse back within two and half minutes, and an emergency tracheotomy was performed. "But they told me it would be touch and go," Smith says.

Katrine Voie, an intern; Gareth Buckley, a resident; and staff veterinarian Therese O'Toole, V95, were on duty that day. They believe that Anna Marie's crisis was caused by ingesting rodenticide, an anticoagulant, which led to extensive internal bleeding. Smith thinks it's possible that her dog might have gotten into rat poison on a camping trip a week earlier, but the source of the toxic substance remains a mystery. Anna Marie was treated with vitamin K, the antidote for rat poison. Once her internal bleeding was controlled, she began to improve.

By the next day, Anna Marie was able to stand. Two days after her admission, the dog's tracheotomy tube was removed, and she was ready to go home. Follow-up treatment included a 30-day regimen of vitamin K.

"I took Anna home right from ICU," says Smith. "There were no hikes or kayaking for her for a while." But by September, Anna Marie was back to her bouncy self.

"That was a good save," says O'Toole.

—Catherine O'Neill Grace

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## Neighbors and Friends



THE CUMMINGS SCHOOL IS FORTUNATE IN ITS LOCATION. OUTSTANDING public and private institutions of higher learning and a vibrant life sciences industry define the Greater Boston–Worcester corridor.

At the Cummings School we are caregivers, teachers, scientists and savvy life sciences business partners, and our efforts complement the work of our neighbors in central Massachusetts. Nowhere are our projects more innovative and diverse than in the Tufts Biotechnology Transfer Center and Grafton Science Park. We have leveraged our substantial scientific and clinical expertise in these areas to assist startup companies and to provide consultation and

facilities to industry and academia.

Our newest educational program—shelter medicine—is being launched with the support of our extended Worcester-to-Boston community. Boston is home to some of the oldest and most respected animal welfare organizations in the country, and we are pleased to partner with them to provide the highest quality shelter medicine experiences for our students. In this issue you will learn how the 140-year-old Massachusetts Society for the Prevention of Cruelty to Animals and the Animal Rescue League of Boston, founded in 1899, and others are working with us to build a community more capable of meeting the needs of shelter patients and underserved populations.

The Cummings School is also fortunate in its friends. Our good work could not occur without their support and dedication. Behind the list of donors whom we thank in this issue is a remarkable range of initiatives that have helped animals, assisted students and faculty and advanced biomedical and veterinary research. We are so very thankful to the friends who have helped preserve the excellence of our programs and who continue to support us in our aspirations, despite these challenging financial times.

No one has been a better friend of the Cummings School than the late Dr. Henry “Hank” Foster. Without Dr. Foster’s efforts, the Commonwealth might never have taken a chance on its fourth, and only remaining, veterinary education program. Dr. Foster was truly the father of this school, and his wisdom, strategic thinking and devotion to the veterinary profession made him a willing mentor and confidante for every dean since the school’s founding. He was a tremendously gracious gentleman who served as a role model for straight talk, kind understanding and support. For 18 years, as chair of our Board of Overseers, he instilled his passion for the Cummings School in other overseers and in generous friends.

Our next issue will include a tribute to Dr. Foster as a reminder of the impact he had on veterinary medicine at Tufts University and in New England—and, indeed, around the world.

DR. DEBORAH TURNER KOICHEVAR  
DEAN

Tierra Wilson, V10, stands amid the dense vegetation that shelters a dwindling population of mountain gorillas in Rwanda.



## Something to Chew On

**Tierra Wilson's playful invention helps safeguard endangered mountain gorillas**

**T**HE VIRUNGA VOLCANOES REGION OF NORTHERN RWANDA IS A long way from Grass Valley, Calif., where Tierra Wilson, V10, grew up on a small farm where the animals were members of the family. But her quest to preserve an endangered species led her to remote areas of Africa to work on a research project to monitor the health of free-living mountain gorillas there.

In these days of ecotourism, “you can be on a plane, breathing in a bath of pathogens, and then be sitting by a gorilla a few hours later,” says Wilson. “Yet we know so little about these animals. It’s really uncharted territory, and they’re so endangered.”

This past summer, Wilson worked with the Mountain Gorilla Veterinary Project to develop a non-invasive saliva collection technique that will allow wildlife veterinarians to better monitor disease outbreaks among the endangered primates, which now number only about 700. They all live in the forests of the Virunga Mountains in Central Africa, on the volcanic slopes of Rwanda, Uganda and the Democratic Republic of Congo.

While ecotourism has brought greater economic stability to the area, it has also greatly increased the risk that mountain gorillas may catch human diseases.

Several gorilla troops have been habituated to humans, and there have been outbreaks of respiratory disease in the troops. Suspected causes of the outbreaks include influenza, parainfluenza (PIV), respiratory syncytial virus (RSV) and adenovirus.

The gorillas are also threatened by habitat encroachment. Local farmers are cultivating land up to the boundaries of the parks where the animals are protected. Poaching, war and civil unrest also have exacted a toll on the population.

Traditionally, non-invasive health monitoring of the mountain gorilla population has been done by collecting and analyzing feces. While this method minimizes the gorillas’ stress and does not disrupt their social structure, it makes early detection

and diagnosis of disease outbreaks difficult because many pathogens are not detectable in feces. Chewed plant samples, on the other hand, are easier to collect and contain secretions directly related to the respiratory tract.

To collect the gorillas' saliva for diagnostic testing, Wilson gathered up discarded wild celery that they had munched on and found there was enough saliva to assess the presence of pathogenic bacteria and viruses.

Then Wilson came up with a playful innovation: she designed a toy to harvest gorilla saliva.

"We were a bit skeptical, especially because gorillas tend to destroy their toys," Lucy Spelman, the regional veterinary director for the Mountain Gorilla Project and former director of the National Zoo in Washington, D.C., wrote in her blog (<http://discovery.blogs.com/quest>). "Tierra tried out two versions of the saliva chew toy. Each used thick (0.5-inch) dental rope soaked in juice. One was a plastic container with holes drilled in the lid. Tierra plugged these holes with several short bits of rope, but the gorillas promptly pulled them out. The other, a mesh bag large enough to contain a longer piece of juice-soaked rope, worked beautifully. The gorillas put the bags in their mouths and chewed on the rope, trying to extract every bit of juice. When Tierra later centrifuged the chewed-on rope, she recovered lots of alpha-amylase-positive fluid," which indicates the presence of saliva.

Wilson's saliva collection methods have the potential to improve monitoring of the mountain gorillas' health, as well as provide data on their stress hormones and DNA.

During her time at the Cummings School, Wilson has also conducted research on tuberculosis in elephants in Nepal. Her affinity for primates was nurtured before vet school, when she worked with the Gorilla Foundation in California as a research assistant and caregiver for Koko, a gorilla famous for learning sign language. Working with endangered mountain gorillas was a logical extension of that passion, Wilson says. "I felt I could make the most difference working with them."

**To learn more about the Mountain Gorilla Veterinary Project, visit <http://www.gorilladoctors.com>.**



## KING OF THE TURTLES

**T**HE GEORGIA SEA TURTLE CENTER, LOCATED ON JEKYLL ISLAND, HAS APPOINTED TERRY M. Norton, V91, as its new director. He had been the director of veterinary services for the organization since it opened on June 16, 2007, and continues to serve in that capacity.

The Sea Turtle Center provides rehabilitation treatment for injured sea turtles and other wildlife; conducts research and professional training in wildlife medicine, husbandry, biology and education; and offers educational programs for the public. Since it opened, more than 110,000 visitors have toured the \$3 million, 10,000-square-foot facility.

"It's an interactive educational environment," says Norton. "Visitors to our center really get engaged. For example, our treatment room has a window so that visitors can actually watch us work on our patients, and we can discuss the particular animal's life history, medical problem and treatment or surgery. A walkway through the rehabilitation area allows them to see the turtles we are nursing back to health, with the goal of releasing them back into the sea," he says.

"Our center is the first of its kind in Georgia, and as far as I know, it's the only one in the country that comprehensively integrates rehabilitation, interactive education, professional training and veterinary research."

In spring 2009, the center plans to host an International Sea Turtle Rehabilitation Workshop in partnership with many other institutions, among them Ross University in St. Kitts, the Georgia Department of Natural Resources, the Jekyll Island Authority and Foundation, the veterinary schools at the University of Florida and the University of Georgia and the Turtle Hospital in Marathon Key, Fla.

"My long-term vision is to expand the scope of our mission," Norton says. "In the future we'd like to develop health-related programs for a wider variety of native wildlife and promote ecosystem health locally and internationally, while at the same time increasing our efforts on behalf of turtles."

**To learn more about the Georgia Sea Turtle Center, visit [www.GeorgiaSeaTurtleCenter.org](http://www.GeorgiaSeaTurtleCenter.org).**

## OVERHEARD

“Animals can’t help themselves, so someone has to take care of them. We’re strong of body and mind, and if we can’t take care of others, what does life mean?”

—UNIVERSITY TRUSTEE AGNES VARIS, H03, speaking at the Cummings School on September 23, at the dedication of the new Agnes Varis Campus Center

## TIME TO SERVE

IN THE COVER STORY OF THE SEPTEMBER 22 ISSUE of *Time* magazine—“21 Ways to Serve America”—Tufts University President Lawrence S. Bacow joined the likes of Colin Powell and Arnold Schwarzenegger in penning suggestions for improving the country.

In his article, “Get Your College Involved,” Bacow wrote that colleges and universities “have a special responsibility to educate the next generation of active, engaged citizens” and encourage them to get involved in public service.

He argued that to “address this nation’s major challenges, we need people across the political spectrum to serve in government, to run for office and to work to build stronger, more vibrant communities.”

Bacow outlined the efforts Tufts has made to encourage its graduates to pursue careers in the nonprofit or public sectors, focusing on the Loan Repayment Assistance Program, believed to be the first university-wide program of its kind in the country. The program, which helps graduates working in the nonprofit or public sectors pay their student loans, received more than 400 applications for assistance this year.

“Helping young people pursue their passion for service is one of the best investments our society can make,” Bacow wrote.



U.S. Olympian Laura Kraut guides her German-bred gelding Cedric over a jump.

## Gold Standard

Tim Ober, V90, had a terrific Beijing Olympics—even though he did not compete in a single event. But he did have a hand in winning two gold medals, a silver and a bronze for the United States, as well as a gold and silver for Canada—as a veterinarian for the U.S. Equestrian Federation. Ober cared for the Olympic show-jumping horses in Hong Kong, where the 2008 Olympic equestrian contests were held. The American team won gold in team jumping, a silver in eventing and a bronze in jumping. “It was a very exciting trip,” says Ober, who also served as a team veterinarian at the Games in Athens in 2004. “We were the first team to win back-to-back Olympic team gold medals. And we got all the horses home healthy and sound.”



Incubating  
innovation in the  
life sciences on  
the Cummings  
School campus

# CATALYST FOR PROGRESS

A CASUAL DRIVER PASSING THE CUMMINGS SCHOOL CAMPUS IS LIKELY TO SPOT A CLIENT walking a dog near the Foster Hospital for Small Animals or catch a glimpse of a small flock of sheep or even a couple of llamas in the fields on Willard Road. Less visible, but as vibrant, is the collaborative work going on in the laboratories used by clients of the Tufts Biotechnology Transfer Center.

Since 1985, the Cummings School has made its faculty expertise and unique research infrastructure available to outside investigators. In 1994, the center was established with support from the U.S. Department of Commerce Small Business Administration to create a vibrant biotechnology sector 35 miles west of Boston.

“We have developed an organized program of collaborative contract research here to make our faculty’s expertise and research infrastructure available to other academic research institutions and life science companies in the region,” notes Joseph P. McManus, executive associate dean of the Cummings School.

Those businesses include biotechnology companies, medical device and pharmaceutical companies and animal health companies. “We have one of the best concentrations of life sciences industries of any veterinary school in North America, so that’s our constituency,” McManus says. “Our incubator model is somewhat unusual because it takes both startups and preclinical operations of somewhat more mature companies.”

Another difference: Tufts does not offer business planning, secretarial support or venture capital financing to companies housed on the Grafton campus. But the businesses “get good

BY CATHERINE O’NEILL GRACE ILLUSTRATION BY JAMES O’BRIEN

lab space, ready programmatic access to our faculty and to our research facilities and links to a vibrant life science community,” McManus says.

Since the incubation effort began, 19 companies have moved to campus, either during their startup phase or to undertake preclinical research. “We charge real rent,” says McManus. “But there’s added value here in terms of access to people and enabling infrastructure that are worth much more than rent.”

Among the successes that grew in the incubator program is GTC Biotherapeutics. Now based in Framingham, Mass., the company began as an incubator collaboration with Louisiana State University and Cummings School researchers. GTC Biotherapeutics develops, produces and brings to market therapeutic proteins made through transgenic animal technology. ATryn®, the company’s form of human antithrombin—a protein in plasma that helps regulate blood clotting—is the first transgenically produced protein to be approved anywhere in the world. It was recently approved by the European Commission for treating deep vein blood clots.

The key enabling science for GTC Biotherapeutics is the development of human therapeutic proteins in the milk of transgenic animals. Transgenic animals, which are genetically altered, express human therapeutic proteins in their milk. These proteins can be efficiently purified from the milk—in this case, from milk produced by transgenic goats. GTC also is developing additional forms of therapeutic proteins with potential treatment applications in hematology, oncology and autoimmune diseases.

Another breakthrough incubated at Tufts is the Biologic Lung Volume Reduction (BLVR) System, developed by Aeris Therapeutics Inc. The BLVR System, now in clinical trials, provides a minimally invasive treatment alternative for patients with advanced emphysema who have limited treatment options. The emerging medical therapeutics company is developing innovative therapies to improve the lives of patients with emphysema and other advanced lung diseases. Aeris Therapeutics is privately held, with corporate offices in Woburn, Mass.

The Tufts incubator also nurtured the work behind CogniScent, a university

faculty startup. After years of basic molecular research, coinventors John Kauer and Joel White, both neuroscientists at Tufts University School of Medicine, developed an artificial nose—an “e-nose”—that recognizes vapor molecules through mechanical, electronic and optical components. The device can be used to detect chemical warfare agents, toxic industrial chemicals and explosives. They’ve also developed a portable prototype of the e-nose that can detect buried land mines. Kauer and White incorporated their company in 2002, and much of its work has been funded by the U.S. Defense Advanced Research Projects Agency (DARPA), the Office of Naval Research and Homeland Security. CogniScent is still housed in incubator space at the Cummings School, where a staff of eight is working to bring the technology to market.

Recognizing the need expressed by incubator tenants and other life science

companies for larger life science-friendly real estate in the area, the Cummings School has begun developing the Grafton Science Park. This location will allow 702,000 square feet of science-oriented development on 100 acres just down the street from the main campus. The cornerstone of the park, opening in spring 2009, will be the 41,000-square-foot New England Regional Biosafety Laboratory (NE-RBL), which will house research on emerging infectious diseases and food- and water-borne illness and play a critical role in the school’s collaborative and contract research program. The facility will allow researchers to conduct their work in a safe, high-security environment. The RBL will enable Tufts researchers to build upon the work they have been doing for nearly three decades to improve human and animal health through better detection, prevention and treatment of infectious disease and also will serve as a regional resource for other New England scientists conducting similar public health research.

“It is a more advanced facility, which will enable our faculty to do more advanced biosafety-level research,” says McManus. “We expect it will be attractive for companies that are working on vaccines, antibiotics and bio-defense applications that need to have this kind of containment environment. But this is not just a building that has special capabilities; it comes along with our faculty who are leaders in infectious disease research.”

The Tufts Biotechnology Transfer Center, the soon-to-open biosafety laboratory and the future Grafton Science Park allow regional companies to conduct research close to home.

“All this really comes under the label of translational research,” says McManus. “We help companies move from the benchtop through animal trials, proof of concept, proof of principle and efficacy testing to get to human clinical trials.

“We help companies get their R&D work done while staying in Massachusetts, with the incubator to help them start and Grafton Science Park available for larger operations. And it’s across the street from the MBTA train station on the route between Boston, Framingham and Worcester, and across the street from a federal job-training program. It’s a beautiful economic development story.” **TVM**

## INCUBATION FROM A TO V

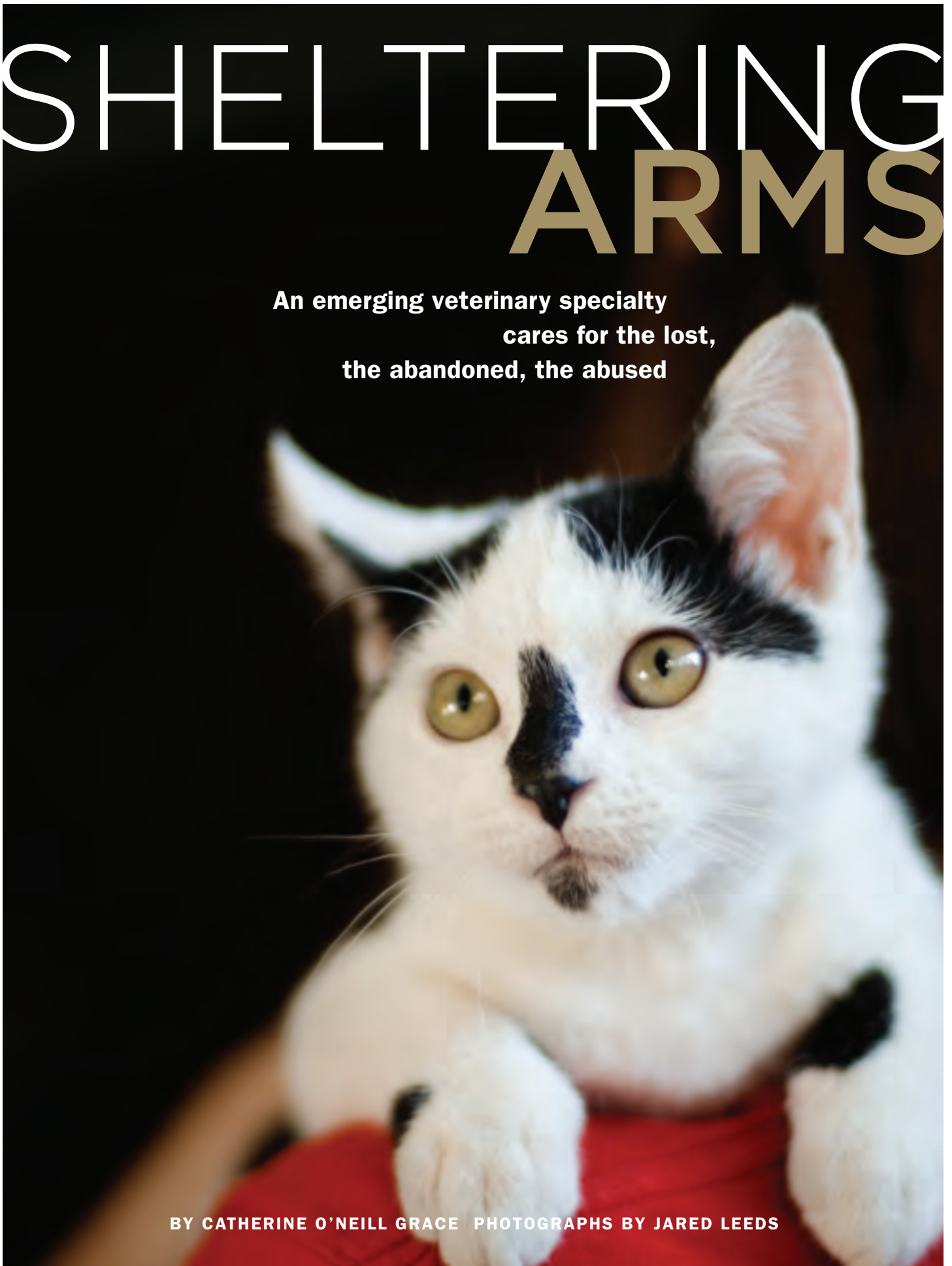
**These companies have incubated on the Grafton campus to date, making advances in a variety of fields, including diagnostic testing, medical imaging, surgical device design and manufacture and biotechnology:**

- Aeris Therapeutics
- Antigensics
- Biovalve
- Capsule Technologies
- CHI Scientific Inc.
- Circe Biomedical
- CogniScent
- Cyagra
- Diacrin
- Encelle
- GTC Biotherapeutics
- Imutran U.S.A.
- Midas Biologicals (now Tranxenogen)
- Pulmonary Metrics
- Securos
- Sequitur
- Stryker Biotech
- Verigen
- Vivo RX

# SHELTERING ARMS

**An emerging veterinary specialty  
cares for the lost,  
the abandoned, the abused**

**BY CATHERINE O'NEILL GRACE PHOTOGRAPHS BY JARED LEEDS**



**F**OR WEEKS, COCOA STAR, A KITTEN RECOVERING FROM MULTIPLE SURGERIES, LIVED ON MARTHA SMITH'S DESK at the Animal Rescue League of Boston shelter in the South End. "She came to us after she was caught in a fan belt in a car in Charlestown," says Smith, V97, director of veterinary medical services at the shelter. "She was a stray, a beautiful Siamese about five months old. She had horrible tears to her skin and had required a lot of reconstructive surgery."

Although Cocoa Star had an implanted microchip from a shelter in the Midwest, information linking her to an adopter could not be found. Smith tried advertising in the newspaper, but no one claimed the cat. "She was from Cedar Falls, Iowa, and someone had cared enough about her to move her to Boston," Smith says. "But she ended up with us. We put her back together, and it took many months, but she got adopted out, and her story had a happy ending."

It's successes like these that get Smith up in the morning and energize her for her work as a shelter veterinarian. As a student at the Cummings School, working in a shelter wasn't part of her career plan, because until recently, most U.S. veterinary schools did not include shelter medicine among their menu of curricula.

That has changed as the notion of shelter animals as throwaways is no longer accepted. Animal welfare organizations and the public are demanding medical care and permanent homes, not euthanasia, from the shelters that harbor lost, homeless or unwanted animals. And as the practice of euthanizing healthy

animals as a way to control population has become increasingly unacceptable, shelters have found themselves struggling with caring for burgeoning numbers of pets, rising costs and the complex medical challenges of managing animals with unknown or incomplete medical histories.

Although there is no national clearinghouse for data on animal shelters, the Humane Society of the United States estimates that shelters care for between 5 and 7 million dogs and cats every year; approximately 3 to 4 million of them are euthanized. Another 2 to 3 million are placed in permanent homes. And while 63 percent of American households have pets, only about 16 percent of those households adopt from shelters, according to the American Pet Products Manufacturing Association.

Keeping these shelter animals healthy (they're at higher risk for infectious diseases and may pose a threat to public health through rabies and other diseases transmitted from animals to humans), and training veterinarians to care for them and prepare them for adoption, have become urgent needs.

Enter shelter medicine. The Association of Shelter Veterinarians ([www.shelternet.org](http://www.shelternet.org)), founded in 2003, now has some 600 members and a dozen student chapters—including one at the Cummings School. The association is pursuing board-specialty status for the field. Programs in shelter medicine are offered at a number of U.S. veterinary schools, and the Humane Society of the United States publishes the bimonthly *Animal Sheltering* magazine.

At the Cummings School, veterinarians in the Center for Animals and Public Policy and the department of clinical sciences are partnering with the Animal Rescue League of Boston and the Massachusetts Society for the Prevention of Cruelty to Animals to design and establish a shelter medicine training program at Tufts. The goal is to offer a certificate in shelter medicine.

Like many of the programs that have successfully launched at the Cummings School, the impetus for the shelter medicine program began with the students. At least half of the students applying for admission write about their interest in animal sheltering. Many have obtained animal-care experience through volunteering or working at an animal shelter.

Three years ago, Annette Rauch, V86, G01, who is interim director of Tufts' nascent shelter medicine program, supported a group of Cummings students in their desire to launch the Tufts Shelter Medicine Club, now among the most active student groups on campus. The club sponsors educational seminars, takes groups of students on field trips to shelters and holds a yearly drive to provide food, toys, blankets and other supplies to local shelters. And just last spring, the club sponsored a free vaccination clinic for pet owners in the Worcester area.

In their exit interviews before they graduate from the Cummings School, students often express their desire for more surgical training and for more exposure to shelter medicine. The shelter medicine program will address both issues by establishing new courses and surgical and shelter rotation electives.



**Annette Rauch, V86, G01, left, and Emily McCobb, V00, G03, spearheaded the development of the new shelter medicine curriculum at the Cummings School.**

This fall, in a first step toward full implementation of the program, students had the opportunity to perform additional surgeries on shelter animals in the school's Luke & Lily Lerner Spay/Neuter Clinic, under the supervision of Susan L. Mitchell, V91, an assistant professor of clinical sciences.

"The spay clinic has the dual mission of serving the local animal shelter community—which means doing up to 30 surgeries a week—and teaching our students," says Emily McCobb, V00, G03, an anesthesiologist at Tufts' Veterinary Emergency Treatment & Specialties (VETS) in Walpole, Mass., who served on the working group to develop the shelter medicine program. Contributions from Cummings School overseers V. Duncan and Diana L. Johnson, who've adopted many of their pets from shelters, the Kenneth A. Scott Charitable Trust, the Trimix Foundation and the Massachusetts Animal Coalition have helped support the program.

Training more veterinarians in the field will improve the lives of millions of homeless animals in shelters throughout the United States, not only in terms of providing care but in making the public aware of the enormous needs of this animal population. (Even President-elect Barack Obama says the First Dog, a campaign promise to his two young daughters, may arrive at the White House via a shelter.)

"When shelters were started 150 years ago, many people looked at the animals in them as unnecessary, as unwanted throwaway animals, and they were just put to sleep," Rauch says. "We have evolved to have a more compassionate outlook. Now we believe it's a worthy enterprise to keep these animals.

Animals are also staying at shelters for longer periods of time, she notes. "They may live there for a week, a month or a year before they find a home. We want a 'forever' home for every animal, but to make that happen we want to make sure that our animals are medically and behaviorally healthy—and that's where shelter medicine comes in."

Training veterinary students to recognize the special needs of shelter animals, and how to diagnose and treat them, is critically important to addressing long-term solutions for this vulnerable population of animals, Rauch says. Because the typical patients Cummings students see during their in-hospital training have devoted owners and are well cared for, they are not exposed to

the range of problems that can afflict animals that have not had regular preventive care, or have been abused or neglected. The new shelter medicine program—including rotations at the busy Boston shelters affiliated with it—will provide experiences students may otherwise not get during their traditional D.V.M. studies.

The Cummings School is ideally situated to offer a concentration in shelter medicine, says McCobb of Tufts VETS. "We are lucky that New England is such a nexus of animal welfare. We have leaders in our state at the MSPCA, the Animal Rescue League of Boston, as well as the Massachusetts Animal Coalition—and there are many other small rescue organizations and animal welfare organizations here. As a region, we are considered progressive and animal-welfare-oriented. So the resources for our students are great," she says.

"If you're welfare motivated, if you care about not just the individual animals but also the problems we have with animal welfare in our society, shelter medicine is a nice niche," says McCobb, who's also a director of the Massachusetts Animal Coalition. "You can really feel like you're making a difference. You become the advocate for all the animals that are in the shelter and those that will be in the shelter in the future."

Two of those advocates graduated from the Cummings School more than a decade ago, before shelter medicine had found its way.

"The shelter environment used to be difficult to work in," says Gary L. Weitzman, V89, chair of the District of Columbia Board of Veterinary Medicine and executive director of the Washington Animal Rescue League. "But that's not where the specialty is now. Shelters are not dark dingy places anymore. Really good shelters have associated hospitals and are doing cutting-edge medicine. And I love it. I really hope that this specialty becomes more prevalent and more of an opportunity for new graduates. It offers everything you ever wanted to do as a vet."

Weitzman began his career in private practice before joining the Air Force and working in public health. He also managed a breast cancer research program for the U.S. Army. Eventually, back in civilian life, he opened a practice in San Francisco. After selling it, he moved to Washington, D.C., to help direct a congressional cancer research program.

## TOO MANY PETS

**Between 4,000 and 6,000**

Number of animal shelters in the United States

**5 to 7 million**

Number of cats and dogs entering shelters each year

**3 to 4 million**

Number of cats and dogs euthanized by shelters each year

**2 to 3 million**

Number of cats and dogs adopted from shelters each year

**Between 300,000 and 400,000**

Number of cats and dogs reclaimed by owners from shelters each year

**25**

Percentage of dogs in shelters that are purebred

**3**

Average number of litters a fertile cat can produce in one year

**4 to 6**

Average number of kittens in a feline litter

**2**

Average number of litters a fertile dog can produce in one year

**6 to 10**

Average number of puppies in a canine litter

**Source: Humane Society of the United States and the National Council on Pet Population, Study and Policy**

To keep his hand in veterinary medicine, he volunteered at the Washington Animal Rescue League. “They said, ‘By the way, we need a medical director. Are you interested?’ And I said, one million percent, yes.”

He’s never looked back. Although Weitzman welcomes the opportunity to practice hands-on medicine, he says the really great moments come when the animals find homes. “When you are in the lobby and you see a dog or a cat that you worked on going home to a new family—our front desk will make an announcement, like ‘Zydeco is going home!’—that’s the best thing.”

Like Weitzman, Martha Smith came to shelter medicine by a circuitous route. After earning an undergraduate degree in international relations, she ended up in Boston. “I was working temp jobs, and when you work temp in Boston, you end up in the health-care field,” she says. “I got a job as the second-shift radiology librarian at Massachusetts General Hospital. My job was to make sure that everybody got the X-rays they were supposed to have—they were still on film at the time—and that they were filed away properly so they could be found when people needed them. But I was getting in trouble because I was spending more time looking at the X-rays than I was making sure they were going where they were supposed to go. It made me think that I have this strong interest in medicine and answering the unanswered questions. So I decided to go back to school.”

Within weeks of enrolling at Tufts, she had found her passion. “There was never a dull moment,” she says. “Every experience opened my curiosity. During my zoo rotation, I wanted to be a zoo vet. During my dairy rotation, I realized I loved dairy cows, so I was going to be a dairy vet. It was such a rich experience.”

Smith had what she describes as a “brief stint” in private practice, but the fit wasn’t right. “I started volunteering at the MSPCA shelter and really enjoyed it. The shelter manager at the time said, ‘You’re a shelter veterinarian.’ And I laughed. ‘As if there really



were such a thing,’ I said. I wasn’t even really aware that shelters employed veterinarians.”

But the MSPCA obtained funding for a staff veterinarian, and offered Smith the position. “After about three months I realized I didn’t have to look around anymore for what I wanted to do. I was a full-time shelter veterinarian.”

Inevitably, an important component of shelter medicine is animal cruelty investigation. “Shelter veterinarians are playing a

growing role in the forensic investigation of animal cruelty,” says Smith, who works closely with law enforcement in Boston.

Adds Weitzman: “The only downside of taking care of homeless animals is the inherent emotional issues that come with seeing that abuse and neglect and cruelty—but doing something about that is really rewarding. You get to intervene for the animal.”

Shelter medicine is advancing on all fronts, Smith says—the medical, the surgical

“Maybe it was my itinerant childhood ...

that led me to feel that ensuring that these animals will have a home that lasts matters most to me.”

—Martha Smith, V97



**Top left: Martha Smith, V97, director of veterinary services at the Animal Rescue League of Boston, examines a cat. Above: Smith repairs a cut on a stray dog's ear. Shelter veterinarians like Smith work to ensure that homeless animals are healthy—and adoptable.**

and the behavioral—in response to pressure from society to rescue and rehabilitate, rather than dispose of unwanted animals. A lot of what shelter medicine focuses on is assessing animals' needs and figuring out how to make them adoptable.

“You have to find out where the deficits are, and if it's something that's broken that we have the resources to fix to make the animal sound before it goes out. Or is this something that will continue to cause the animal suffering, and it's time to make that fair decision on behalf of the animal and euthanize it,” Smith says. “But our emphasis is on rehabilitation. The no-kill movement is a beautiful thing—to try to save as many of these animals as we can. It has become societal,

and it has created the need for shelter veterinarians to keep science in it. When science leaves animal welfare, and it becomes simply a matter of passion, that's when good intentions go wrong.”

Ten years ago Smith moved from the MSPCA to the Animal Rescue League of Boston, which was opening a new shelter. “This organization is very reactive in terms of getting animals off thin ice and off of cliffs and out of trees and all that stuff,” she says. “I enjoy the immediacy, and of course I am responsible for seeing that all these animals are healthy and cared for and get into homes.”

Smith grew up in a Navy family, and says she never really felt settled. “Maybe it was my itinerant childhood and that fact that I had

no place to call home that led me to feel that ensuring that these animals will have a home that lasts matters most to me.”

She has adopted a cat and two dogs from the shelter. “People always ask me, ‘How do you not come home with a thousand animals?’ I promise you that with almost every single animal that I examine, [I think] ‘I'm going to take you home.’ And I do take a piece of them home with me. But you learn to find the balance where you don't literally take them all home. You learn to love and let go.” **TVM**

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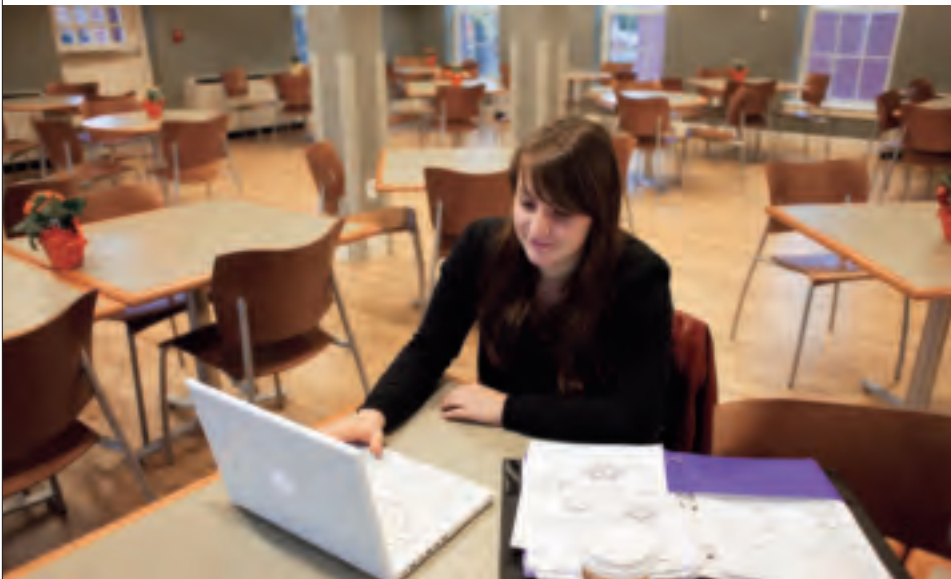
*Catherine Grace is the editor of this magazine. Her cat, Tashi, was adopted from the Erie County SPCA in Buffalo, N.Y. She can be reached at [catherine.grace@tufts.edu](mailto:catherine.grace@tufts.edu).*

# Hub of It All

**Agnes Varis Campus Center seeds the vitality of the veterinary community**

“**T**HIS WAS NOT THE GIFT OF A BUILDING, BUT OF A COMMUNITY,” Tufts University President Lawrence S. Bacow announced at the dedication of the new Agnes Varis Campus Center on September 23. Named for its benefactor, a university trustee and overseer to the Cummings School, the building was once a nurses’ dormitory on the old Grafton State Hospital grounds and had stood vacant for decades. A \$6 million renovation project transformed it into a campus hub, with faculty and staff offices, conference rooms, comfortable student lounges, a bookstore, a gym and the Elms Café. “We had lacked a place to gather informally,” says Dean Deborah T. Kochevar. “And from informal exchanges the very best ideas happen—and the camaraderie that is at the heart of the school.”

—CATHERINE O’NEILL GRACE



**Clockwise from above: Sylvia Lesnikowski, V12, takes advantage of the early-morning quiet in the Elms Café to grab a coffee and review her notes. The café was the gift of David J. McGrath III, V86, a university trustee and overseer to the school. At sunset, the brightly lit windows of the once-vacant building attest to the activity within. In the afternoon, more coffee fuels veterinary students as they take a break before hospital rounds. In the evening, Silvia Bernal and Taryn Gervais, both V11, wind down over a foosball game.**





From top: Alessandro Cirila, a veterinarian visiting from Italy, orders lunch for a meeting with Stefano Pizzirani (in baseball cap), an assistant professor of ophthalmology; Rebecca Steers and Kaitlin Crocker, both V10, work on a project in the second-floor conference room. At day's end, a student hits the treadmill in the basement fitness facility.

# Peace, Love & Alumni

“WOODSTOCK” WAS the theme as alumni from the classes of 1983, 1988, 1993, 1998 and 2003 gathered at the Elms Café in the new Agnes Varis Campus Center on September 6 for the 23rd Annual Reunion & Comeback celebration. It was a milestone event for the Class of 1983, the first class to celebrate its 25th reunion.

At the reunion, two faculty members were inducted into the Faculty Hall of Fame. William D. Rosenblad, V95, president of the Tufts University Veterinary Alumni Association, characterized the recipients as “people we have loved and learned from.” Honored were George Saperstein, the Amelia Peabody Professor of Agricultural Sciences and chair of the department of environmental and population health, and Howard Levine, who was given the award posthumously. Levine, who died in February, was a faculty member for 23 years, headed the Tufts Ambulatory Service and was associate chair of the department



The invitation to the 2008 alumni reunion evoked Woodstock.

of environmental and population health.

“I am as proud to be a teacher as I am to be a veterinarian,” said Saperstein, who has taught at Tufts for 27 years. “You are also teachers, as you teach your clients about science and veterinary medicine. I love this place, and this award is all about you and what you have become—you are emblematic of what this profession is all about.” Saperstein also accepted Levine’s award on behalf of his family. “Your achievements will continue his achievements,” he said.

Also honored was Gretchen E. Kaufman, J76, V86, who received the 12th annual Outstanding Alumnus Award. She is an assistant professor in the department of environmental and population health, and since 2007, has headed the Tufts Center for Conservation Medicine, which focuses on the intersection of human, animal and environmental health. In 2000, Kaufman formed the Greening the Grafton Campus committee, a campus-wide group that works to reduce the environmental footprint of all aspects of the Cummings School’s activities. Kaufman noted that Tufts is “leading the way in environmental medicine and ‘one health’—the connection between animal and human medicine...we are creating a different future for veterinary medicine.”

Also at the reunion, the alumni association presented Dean Deborah T. Kochevar with a reunion giving check for \$50,474.

## THE LEADING EDGE

TWO CUMMINGS SCHOOL STUDENTS HAVE ASSUMED LEADERSHIP ROLES IN THE NATIONAL STUDENT Chapter of the American Veterinary Medical Association (SCAVMA). Rebecca M. Steers, V10, is president-elect of the group, and Beth A. Pelletier, V09, is editor-in-chief of its journal, *The Vet Gazette*.

Steers will become president of SCAVMA, which represents some 11,000 students in 29 chapters, in March 2009. Both the SCAVMA president and president-elect serve as members of the American Veterinary Medical Association’s House of Delegates.

“As president, I will become the students’ representative to the legislative advisory committee,” Steers says. “I will be right there working with them on where we want to put our energies on Capitol Hill. We are a part of such a fabulous profession, and the fact that they give us the opportunity to get the student voice out there shows how much they respect our opinions.”

Pelletier says she took on the job of editing the quarterly *Vet Gazette* after representing the Cummings School in the SCAVMA House of Delegates. “I enjoyed being a delegate and appreciate the importance of the organization,” Pelletier says. “I wanted to stay involved, and editing the publication is a good way to express some creativity, too.” As editor-in-chief, she coordinates and edits all submissions to *The Vet Gazette*, which is published by a different veterinary school each year.



Beth Pelletier, V09, and Rebecca Steers, V10



## Rub-a-Dub-Dog

Members of the Tufts Student Chapter of the American Veterinary Association (SCAVMA) get down and dirty with their annual dog wash that's become popular with the Cummings School's Grafton neighbors. This fall's event netted a little more than \$500, which helps support the Travis Fund for Needy Animals, says Lauren C. Baker, V11, the chapter's president-elect.

## Students Explore the Science Behind Veterinary Care

**M**ARIEKE H. ROSENBAUM, V10, TOOK TOP HONORS FOR HER RESEARCH ON "Integrin-based Isolation and *in vitro* Characterization of a Mesenchymal Cell with Therapeutic Potential from the Murine Lung" at the Cummings School's 19th annual Student Research Day.

Rosenbaum worked with her faculty mentor, Andrew Hoffman, director of the Lung Function Testing Laboratory, who is investigating cell-based therapy for chronic lung diseases such as emphysema and pulmonary fibrosis.

Hoffman's work has led to an important new treatment for emphysema that is undergoing clinical trials. His latest research centers around which cells in the lung, including pulmonary stem cells, have the potential to repair damaged tissue. Rosenbaum contributed to the work by isolating and growing in the lab an unusually "sticky" variety of cell that can be transplanted from one mouse lung to another. The science has led to a better understanding of which cells could be selected for repair of damaged tissue.

"Our summer research program allows students to contribute to the body of scientific knowledge before even entering the veterinary profession," said M. Sawkat Anwer, associate dean for research. "It is a transformative experience for these students."

Marc S. Siegel, V10, took second place in the competition with his research on how "RNAi-mediated Knockdown of Chromatin Remodeling Enzyme Jarid-1 in the Hippocampus Alters Gene Expression and Behaviors in Mice," and Lauren R. O'Connell, V11, took third place with her study of estrogen and anxiety-like behavior in mice with newborn pups.

Fifteen of the 29 student projects presented at the symposium—including Rosenbaum's—were funded through the National Institutes of Health's Summer Research Training Program. Other students received support from the U.S. Army and the Merck-Merial Veterinary Scholars Program.

## BY THE NUMBERS

Some fun facts about the animals, people and places at the Cummings School:

**35,000** Number of livestock treated by the Tufts Ambulatory Service each year

**1,900** Patients that visit the Hospital for Large Animals in a 12-month period

**1,700** Number of ill and injured animals treated at the Wildlife Clinic every year. Recent patients have included a yellow-nosed albatross, a young red fox and a Canada lynx.

**1,000** Square footage of the Agnes Varis Campus Center's exercise and fitness facility

**265** Number of middle school, high school and college students who participated in the school's 2008 Adventures in Veterinary Medicine program, which offers an up-close-and-personal experience in the field

**100** Number of applicants for the Cummings School's two surgical residency openings, according to John Berg, chair of the department of clinical sciences

**13** Number of Regional Biosafety Laboratories nationwide. The New England Regional Biosafety Laboratory (RBL) on Tufts' Grafton campus will join 12 other such facilities when it comes online in spring 2009. The RBL will provide a secure site for Tufts researchers and other scientists to study emerging infectious diseases.

**1** Number of first-year veterinary students who graduated from the Brooklyn College of Music



Big-headed Hubert takes twice-daily doses of chicken-flavored beta blockers and calcium channel blockers to treat his hypertrophic cardiomyopathy, a common feline cardiac disease.

## Headed for Trouble

**A hunch pays off big time in identifying risk for feline heart disease** by Catherine O'Neill Grace

**I**T STARTED AS A HUNCH. VETERINARY CARDIOLOGIST JOHN RUSH noticed that many of his feline patients that had big heads also suffered from hypertrophic cardiomyopathy (HCM), a disease characterized by the thickening of the heart muscle.

“Everybody made fun of Dr. Rush before when he made that comment,” recalls Vicky Yang, V09, who approached Rush about doing research with him. “And Dr. Rush said, ‘Let’s do something about it and prove it either right or wrong.’”

Working with Rush and Lisa M. Freeman, J86, V91, N96, both professors of clinical sciences at the Cummings School, Yang designed the research protocol, rounded up cats with HCM and a control group without the disease and set about trying to prove, or disprove, Rush’s theory.

It turns out that Rush was right.

The researchers examined 25 cats with HCM and 22 healthy control cats, using physical exams and echocardiography. They also collected data on dietary history, body weight, heart size and skeletal dimensions. They discovered that the cats with HCM had larger bodies than the healthy cats, and their skulls, vertebrae and long bones were significantly larger. Their findings were published

in the August 2008 issue of the *American Journal of Veterinary Research*, with Yang as lead author.

“Our focus was trying to figure out if these cats grew faster when they were very young—really in the first year of life—and did that predispose them to HCM,” Yang says of the research, which was supported by the Barkley Fund and Boehringer Ingelheim Animal Health.

Hypertrophic cardiomyopathy afflicts 3 to 6 percent of all cats. It is a manageable, but not curable, condition that can be controlled with medications and diet. “But it’s a pretty serious disease and can reduce a cat’s life span,” says Freeman, who is board-certified in nutrition.

The disease also affects 1 in 500 humans, and is a leading cause of sudden cardiac death in young athletes. Multiple genetic mutations have been identified in people with HCM, and a genetic basis for the disease in cats is suspected. And while genes may predispose cats to developing HCM, the interplay between genetics and environmental factors such as diet and growth patterns may increase its severity.

“We proved our observation,” says Yang, who plans to continue her cardiology studies after she graduates from the Cummings School next spring. “The next step is trying to find out how it happens. If we can prove definitely that it’s the early growth that impacts cats’ health, the finding could have significant implications.”

When Yang began to screen healthy cats for her study control group, she had trouble finding animals of a healthy weight. Of the 47 cats enrolled in the study, 70 percent were overweight or obese.

While that percentage may seem unusually high, Freeman notes there are plenty of fat cats in the United States. “The prevalence [of obesity] in cats mirrors the epidemic of overweight and obesity we have in people,” she says. “It’s a big, big problem, and could be related to why we’re seeing more heart disease in cats.”

The researchers will continue to investigate nutritional and developmental causes of heart disease in cats. “Our impression is that genetics is at the root of this disease, but nutrition has an important impact,” says Freeman.

# Scholarships for Science

**Charles River Laboratories funding boosts training in pathology and laboratory animal medicine** **By Leslie Limon**

**A**LZHEIMER'S DISEASE, CANCER, BEHAVIORAL neuroscience and public health are among the critical research areas pursued by this year's recipients of the Charles River Laboratories Scholarships. The students—Theresa Franz, V11; Mary Smart, V10; Christie Taylor, V11; and Stephanie Woods, V11—are considering careers in international development, laboratory animal medicine and pathology.

Training the next generation of veterinarians in these fields is of keen interest to Charles River, founded as a solo enterprise in 1947 by the late Henry Foster, V83, H92, a longtime Cummings School benefactor who passed away on October 14. Headquartered in Wilmington, Mass., Charles River operates 60 facilities in 15 countries. The company provides research models and support services to pharmaceutical, biotechnology, government and academic organizations to speed drug discovery and

development. Its Humane Care Initiative, instituted in 2002, raises employee awareness of and provides training in animal welfare practices.

The scholarships were funded with a gift of \$250,000 from Charles River last May. Of that amount, \$150,000 was allocated to the school's annual fund to support student scholarships and current operations. The gift also bolsters academic programs in pathology and the D.V.M./M.S. degree program in laboratory animal medicine. "Both programs address the growing need for veterinarians trained in pathology and laboratory animal medicine," says Dean Deborah T. Kochevar, who was appointed to Charles River's board of directors in October.

Representatives from Charles River have come to the Cummings School as guest lecturers, and veterinary students have had the opportunity to enroll in the company-sponsored "short courses" in laboratory animal medicine.

"We wholeheartedly support the School of Veterinary Medicine's mission to improve the health and well-being of animals and people," says James C. Foster, chairman, president and CEO of Charles River. "We have a deep admiration and respect for the critical work conducted at the school, as well as its talented faculty, staff and students."

Indeed Charles River has hired several Cummings alumni, among them Theresa Albers, V91, director of pathology for the firm's research animal diagnostic services. Lara Weaver, V00, interim director of the Cummings School's Division of Teaching and Research Resources, also worked at Charles River after graduation, first as a clinical veterinarian and then as assistant director of veterinary services.

Albers notes there is a high demand for laboratory animal medicine veterinarians and veterinary pathologists with expertise in laboratory animals. "Charles River has always been, and is increasingly, a major employer of veterinarians," she says. "I am proud to work for a company founded by a veterinarian at which the contribution of veterinarians is so respected."



**Christie Taylor, V11, recipient of a Charles River Laboratories Scholarship, has conducted research on Alzheimer's disease and breast cancer and traveled to China to study severe acute respiratory syndrome (SARS) transmission in bats.**



## Got Milk?

A gloved volunteer uses a syringe to feed formula to a baby squirrel that fell from its nest and was brought to the Tufts Wildlife Clinic. Each summer and fall, neighbors of the Cummings School of Veterinary Medicine in North Grafton, Mass., bring dozens of orphaned or injured baby animals—squirrels, finches, opossums, rabbits, even a fox—to the center for care. Volunteers, collectively

known as the “Wild Baby Team,” work in shifts to feed and attend to the animals—while guarding against them becoming attached. “You care about them, but you don’t want them to imprint on humans,” says Lydia C. Scheidler, V11, student coordinator of the team. Many of the babies survive and are sent to rehabilitators around New England before being released back into the wild.

# Thank You



TUFTS UNIVERSITY THANKS EVERYONE WHO GENEROUSLY COMMITTED A TOTAL OF \$16.4 MILLION IN gifts and pledges to the Cummings School of Veterinary Medicine in the 2007–08 fiscal year (July 1, 2007 to June 30, 2008). Your support has advanced the overall achievement of *Beyond Boundaries: The Campaign for Tufts* to \$104 million. Your gifts provided essential support for all our academic and animal-care programs, helping to make the school a wonderful place to be a student, a member of the faculty or staff, a client or a patient. We regret that space limits our ability to list all supporters. Please know that every gift is greatly appreciated, and a gift in any amount makes a difference. You are our partners, and our success reflects your generosity.

## ALL IN THE FAMILY



Janet Silva and Gary Caldwell

When Gary Caldwell's mother passed away last year, her frugal Yankee investing made it possible for him and his wife, Janet Silva, to start planning not only for their retirement but also for a charitable gift to the

Cummings School. They decided to make a gift in memory of the late Barbara Chaffee Caldwell, who had rescued dogs and had been a friend and supporter of the veterinary school.

"The Tufts family is an extension of our family," says Caldwell, director of rowing at Tufts. Caldwell and his wife, an assistant athletic trainer at the university, have worked at Tufts for a combined 48 years. "Tufts leaders have a vision that we share and enthusiastically endorse," he says.

The couple established a deferred gift annuity as a tribute to Barbara Caldwell's commitment to the well-being of animals. This type of annuity allowed them to make the gift now and defer the income stream until they retire.

"I knew my mom would be pleased if we tithed a certain percentage of her estate to good works," Caldwell says. "We're building something here [at Tufts]—both metaphorically and literally."

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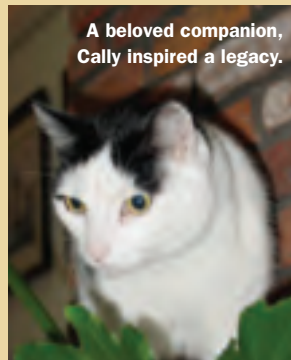
IT ALL STARTED WITH A CAT, A LUMP THE SIZE OF A JELLYBEAN AND A pact. A dozen years ago, Janice and Reid Smith's cat, Callaway, had a small lump on his shoulder removed and sent to the Cummings School of Veterinary Medicine for a biopsy. While they waited and worried and prayed for their "Cally," the Smiths made a pact—if Callaway was cancer-free, they would always support the Cummings School.

Callaway was healthy and just needed time to recover from the surgery. Throughout his 14-year life, Callaway survived numerous other health problems, including kidney disease and a leaky heart valve. A few years ago, Callaway passed away. "While we miss Callaway dreadfully, we know we gave him the best life and health care possible," says Janice Smith, a friend and generous supporter of the Cummings School for 12 years.

"To this day we support the school," says Smith, an account executive for The Hartford, who lives with her husband in Glastonbury, Conn. The Smiths have decided to make a bequest to the Cummings School. "Reid and I hope that animals everywhere, particularly cats and kittens, benefit from the research, the cutting-edge care and the training of new veterinarians that Tufts provides."

Reid Smith, a project manager at Pratt & Whitney, grew up with cats, and Janice has always been a "cat person," she says, but wasn't allowed to own one as a child due to her father's allergies. The Smiths raised three cats before Callaway, and now they keep busy with Knickers and Dooks, two cats they adopted from the Humane Society in Newington, Conn.

"When I explain what happened to Cally and the wonderful work that Tufts does, it has caused more than a few tears to be shed," Janice Smith says. "Thank you, Tufts!"



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# Manton Foundation Aids Large Animal Care

When an animal with a highly contagious disease is brought to the Cummings School, it is immediately placed in isolation to prevent the illness from spreading to other patients. If the isolation stalls are full, staff reluctantly may have to turn the animal away, fearing an outbreak of disease.

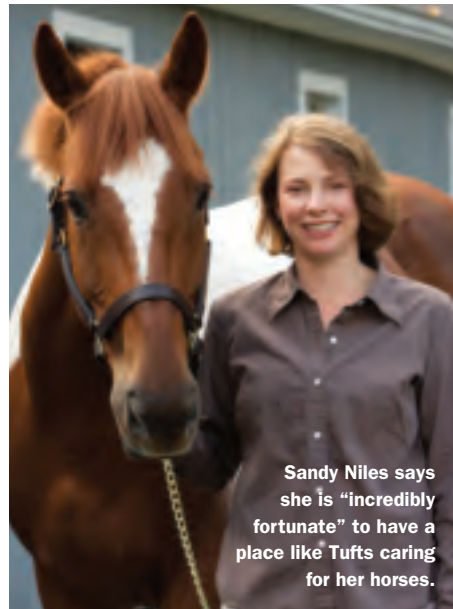
Now, thanks to a \$2.25 million gift from The Manton Foundation, the school's Hospital for Large Animals will have the capacity to care for more animals with infectious diseases. The gift will establish a separate isolation unit for large animals, adding six more isolation stalls to the two existing ones.

"In the summer, especially, there is always an increase in the risk of infectious disease in horses," says Mary Rose Paradis, an associate professor in the department of clinical sciences. "Horses will silently carry salmonella and can put other horses at risk. Another one we see frequently is strangles, a respiratory disease caused by the bacterium *streptococcus equi*. Once you get it in a barn it can spread quickly."

The isolation unit, which will be housed in a separate building not far from the Hospital for Large Animals, will consist of six self-contained stalls with separate ventilation units.

Sandy Niles, a trustee of The Manton Foundation, says her horses, as well as several horses boarding in her stables, have received excellent care at the school. "I have always felt incredibly fortunate to have access to a nationally renowned facility," she says. "The vets, students and staff at Tufts have been so incredible with my horses and with me. The trustees of The Manton Foundation are thrilled to be a part of this project."

—MARJORIE HOWARD



Sandy Niles says she is "incredibly fortunate" to have a place like Tufts caring for her horses.

- Elaine Arthur
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- Lotta M. Crabtree Dumb Animal Foundation Trust
- Manson Publishing Limited
- Richard J. Phelps Charitable Foundation

## Key to Designations

- A & J** School of Arts & Sciences
- E** School of Engineering
- F** Fletcher School

- G** Graduate School of Arts & Sciences
- H** Honorary
- M** School of Medicine

- N** Friedman School of Nutrition Science and Policy
- O** Overseer
- P** Parent
- T** Trustee

- V** Cummings School of Veterinary Medicine
- \*** Deceased
- \*\*** Represents university-wide giving

**Dianne DeLorenzo, V88,**  
owner, Abingdon Square  
Veterinary Clinic,  
New York City



## Loving Tribute

**“We follow our patients for a long time—as long as 20 years,” says Dianne DeLorenzo, V88. “When they pass away, I remember them through Tufts’ Vets CARE program to help others’ pets. This gives grieving clients the knowledge that something good can come out of their beloved pet’s passing. I give to Tufts not only for the great education I received, but also [to celebrate] the bonds I still have with many of my classmates.”**

## VETERINARIANS CARE PROGRAM

Through gifts to the Veterinarians Companion Animals Remembered (CARE) Program, veterinarians extend condolences to clients who have lost beloved pets. The Cummings School is grateful to the following practices and practitioners for their participation in the CARE program:

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Dianne M. DeLorenzo, V88

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# Stress-Free Travel for Your Horse

Mary Rose Paradis, the section head of large animal medicine and surgery and an associate professor of clinical sciences at the Cummings School of Veterinary Medicine, responds to a reader's question about the horses on our highways.

**Q:** I live in a rural area outside a large city. I often see people hauling their horses around in trailers, both on winding back roads and on noisy, busy highways. I've always wondered if traveling this way puts stress on horses. What's the best way to manage transporting such a large animal?

**A:** Transportation stress does occur in horses, especially in those that travel long distances. Researchers have looked at blood indicators of stress, such as immune status and levels of blood glucose and cortisol (a hormone released by stress) in horses that are transported for multiple days. Using these indicators, they have made recommendations on how to decrease the levels of stress in a horse going, say, from New York to California.

If given a choice, an owner should elect to transport a horse free in a loose stall rather than in a straight stall with the animal's head cross-tied. One should stop to rest for an hour for every four to five hours of travel. During the rest period, the horse can be fed and watered and the trailer cleaned. These measures help to decrease horses' stress while traveling and prevent problems that accompany that stress.

The most common health problem associated with transportation stress is respiratory disease. This may be due to a combination of lowered immunity and increased exposure to inhaled particles during transit.

Please send your questions for future installments of "Ask a Vet" to Catherine O'Neill Grace, Editor, Tufts Veterinary Medicine, Cummings School of Veterinary Medicine, 200 Westboro Road, North Grafton, MA 01536. Or send an email to [catherine.grace@tufts.edu](mailto:catherine.grace@tufts.edu).



## HOW TO REACH US

Main hospital switchboard and after-hours emergencies.....	508.839.5395
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Hospital for Large Animals, appointment desk .....	508.839.5935
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If you are interested in learning more about how you can support the Cummings School of Veterinary Medicine, please contact: Shelley Rodman, director of veterinary development and alumni relations, at 508.839.7907, or email: [shelley.rodman@tufts.edu](mailto:shelley.rodman@tufts.edu).



## FAST BREAK

A quick game of foosball in the Agnes Varis Campus Center's busy student lounge provides a relaxing break for Silvia Bernal, in gray, and Taryn Gervais, both V11. The new building—which also houses a café, faculty offices, conference space, a bookstore and a gym—has transformed student life on the school's non-residential campus. Turn to page 14 for a glimpse of a day in the life of the campus center.

PHOTO: ALONSO NICHOLS



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